



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

02/19/2010

Lawrence E. Ashery  
RatnerPrestia  
One Westlakes (Berwyn), Suite 301  
P.O. Box 980  
Valley Forge, PA 19482

EXAMINER

ONY/SLI, O/O O

ART UNIT

PAPER NUMBER

3695

DATE MAILED: 02/19/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,467	07/03/2003	David Myr	MAK-105US	4935

TITLE OF INVENTION: MACHINE LEARNING AUTOMATIC ORDER TRANSMISSION SYSTEM FOR SENDING SELF-OPTIMIZED TRADING SIGNALS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	05/19/2010

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
 or Fax **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590 02/19/2010

Lawrence E. Ashery  
 RatnerPrestia  
 One Westlakes (Berwyn), Suite 301  
 P.O. Box 980  
 Valley Forge, PA 19482

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/613,467 07/03/2003

David Myr

MAK-105US

4935

**TITLE OF INVENTION:** MACHINE LEARNING AUTOMATIC ORDER TRANSMISSION SYSTEM FOR SENDING SELF-OPTIMIZED TRADING SIGNALS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	05/19/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
OYEBISI, OJO O	3695	705-037000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/613,467

07/03/2003

David Myr

MAK-105US

4935

7590

02/19/2010

Lawrence E. Ashery  
RatnerPrestia  
One Westlakes (Berwyn), Suite 301  
P.O. Box 980  
Valley Forge, PA 19482

EXAMINER

ONYEISI, OJO O

ART UNIT

PAPER NUMBER

3695

DATE MAILED: 02/19/2010

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 752 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 752 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/613,467

**Applicant(s)**

MYR, DAVID

**Examiner**

OJO O. OYEBISI

**Art Unit**

3696

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/01/2009.
2. ☒ The allowed claim(s) is/are 1, 3 and 6-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 1, 3 and 6-16 are allowed.

### ***Examiner's Statement of Reason for Allowance***

The following is an examiner's statement of reasons for allowance for all claims:

**Re claim 1.** The prior art fails to teach, or suggest, the limitations of: a multi-channel machine learning trading system for generating a number of independent trading strategies for respective securities, the multi-channel machine learning trading system comprising: a data feed module for receiving real-time and historical trading data on the securities from a remote data server; a trading software module comprising: a trading strategy building module for building the number of independent trading strategies and generating independent respective buy/sell trading signals, based on a number of respective trading parameters used to build each of the trading strategies, the trading parameters being different for each trading strategy, an optimization choice module for generating optimized trading parameters, for each of the trading strategies, by applying a) the number of respective trading parameters and b) historical trading data including a price movement over time of the respective securities in the trading strategy to a regression model to select only the trading parameters that generate respective buy/sell trading signals over time that correspond to the price movement of the respective securities, the selected trading parameters forming the optimized trading parameters, and a multi-channel machine learning module for independently generating respective self- optimized buy/sell trading signals

for each of the trading strategies, by further optimizing the respective optimized trading parameters for each of the trading strategies, based on respective trading results from the real-time trading data; and a multi-channel automatic execution platform for transferring the respective self- optimized buy/sell trading signals for each of the trading strategies simultaneously through a number of parallel programming connection channels from a computer to one or more computerized exchanges, automatically and completely without human intervention.

The closest prior art, is also **the best U.S art:** Kane (US PAT: 6,317,728), Kane discloses a securities and commodities trading system that includes decision logic 14 composed of a plurality of agents 16 (see fig.1). Agents 16 represent different buy and sell rules and the plurality of agents 16 collectively issue buy/sell suggestions for securities transactions. A buy long or a sell short decision is made by a voting algorithm that takes a vote of all decisions of all of agents 16. (Col. 5, lines 8 - 11 and lines 35 - 55). Each agent is assigned a different weight according to its success rate/failure rate and votes according to its assigned weight. (Col. 5, line 58 - Col. 6, line 4 and Col. 8, lines 35 - 49). Kane does not disclose multi-channel machine learning module independently generating building respective self-optimized buy/sell trading signals for each of the trading strategies by further optimizing the respective optimized trading parameters for each of the trading strategies, based on respective trading results from the real-time trading data. Although, Kane teaches that his disclosed system is capable of self updating (see col.11 lines 60-66). However, this is not the same as a multi-channel machine learning module independently generating building

respective self-optimized buy/sell trading signals for each of the trading strategies. The examiner further submits there is not a single teaching in Kane that mentions a trading software module comprising: an optimization choice module for generating optimized trading parameters, for each of the trading strategies and a multi-channel automatic execution platform for-transferring the respective self-optimized buy/sell trading signal for each of the trading strategies simultaneously through a number of parallel programming connection channels from a computer trader's to one or more computerized exchanges, automatically and completely without human intervention.

Furthermore, Freeny (US PAT: 6,594,643), cited prior art, relates to a system for automatically trading real investment items desirably on at least one trading exchange based on predetermined conditions.....An individual trading computer receives predetermined trading criteria for making a trade. The individual trading computer receives the investment data and the predetermined trading criteria. The individual trading computer then analyzes the investment data with the trading criteria and outputs a trade request signal desirably with no manual intervention in response to the analysis determining that the item should be traded. The trade request signal identifies at least one trade of the item to be made by a trader and authorizes the trader to make the trade identified in the trade request so that at least a portion of the trade identified in the trade request signal can be consummated (see Freeny's abstract). Freeny does not disclose a trading software module comprising: an optimization choice module for generating optimized trading parameters, for each of the trading strategies and a multi-channel automatic execution platform for-transferring the respective self-optimized

buy/sell trading signal for each of the trading strategies simultaneously through a number of parallel programming connection channels from a computer trader's to one or more computerized exchanges, automatically and completely without human intervention. Although, Freeny mentions algorithms capable of being used to analyze investment data to generate a trade request to buy/or sell one or more investment item or products. However, this is not equivalent to applicant's optimization choice module for generating optimized trading parameters and a multi-channel automatic execution platform for-transferring the respective self-optimized buy/sell trading signal for each of the trading strategies simultaneously through a number of parallel programming connection channels.

Lastly, Aregon International (**Aregon raises the heat with TS-STAR ... Dealing With Technology**, v 2, n 2, p N/A. Dec, 1989. ISSN: 0955-2138), cited prior art, discloses a system for the analysis, evaluation and implementation of trading strategies. Aregon International fails to disclose an optimization choice module for generating optimized trading parameters, a multi-channel machine learning module for independently generating respective self-optimized buy/sell trading signals, and a multi-channel automatic execution platform for transferring the self-optimized buy/sell trading signals. Although, Aregon International trading toolkit enables the analyst to create and design strategies, involving the analyst to input a number of strategy lines (effectively creating a strategy program in a fourth-generation language) which define the actions that are to be performed on the time series data. However, Aregon International is silent on optimizing these trading strategies and even generating



respective buy/sell trading signals for each of the trading strategy. Updated searches revealed no references that disclosed the claimed inventions, nor were any secondary references identified which could be reasonably combined with Kane.

The drawings submitted on 08/12/06 are acceptable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OJO O. OYEBISI whose telephone number is (571)272-8298. The examiner can normally be reached on 8:30A.M-5:30P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dixon can be reached on (571)272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OJO O OYEBISI/  
Primary Examiner, Art Unit 3695